CATEGORICAL EXCLUSION WORKSHEET:
RESOURCE CONSIDERATIONS

Botany

Crane Point Vegetation Restoration

Palouse Ranger District

Nez Perce/Clearwater National Forest

Description of Purpose & Need for the Proposed Action

The purpose and need explains **why** a project is being proposed. To determine the purpose and need, an interdisciplinary team (IDT) of resource specialists and the Responsible Official compared the differences between existing and desired conditions in the project area, and determined what actions could help "close the gap".

Additionally, as this project is being developed collaboratively, cooperating members of the public, stakeholders, elected officials, and the Coeur d'Alene Tribe are encouraged to offer suggestions and/or ideas that may contribute to the purpose and need.

The primary objectives of the Crane Point project are:

- Decrease current levels of insect and disease mortality to improve forest health and resiliency (maximizing old growth and large trees to the extent possible).
- Increase the amount of western white pine, western larch, and ponderosa pine and in turn decrease the dominance of root-disease intolerant species such as Douglas-fir and grand fir.
- Reduce hazardous fuels in Wildland-Urban Interface
- Harvest wood products to sustain local and regional economies.

Description of the Proposed Action

Proposed vegetation treatments include (Figure 4; Table 2, p. 11):

- 701 acres of commercial timber harvest (622 acres of regeneration and 79 acres of commercial thinning)
    - Estimate approx. 8 – 10 MMBF ($1.5 Million) yield of timber for local communities.
- 20 acres of Old Growth enhancement.
- 241 acres of non-commercial fuels treatment.

The following would be conducted in support of the above:

- Approximately four (4) miles of temporary roads would be constructed to facilitate vegetation treatments and would be decommissioned no later than three (3) years after the project is completed (see Figure 4).
- Road maintenance, reconstruction or improvement.
- Replace culvert on FSR 1274.

Approximately 80% of the commercial timber harvest work would be done using skyline logging systems and 20% using ground-based systems (see standard design criteria for more specific information). Timber would likely be hauled via FSRs 1274 and 1273 plus their associated spur roads.

After the trees are removed for regeneration harvest, the Forest Service is required by law to reduce slash generated from harvest and to prepare sites for planting (regeneration) within three (3) years. Regeneration includes site-preparation (site-prep), reforestation of blister-rust resistant western white pine, western larch, and ponderosa pine, and animal damage control for pocket gophers, where present. Site prep could include:

- Slashing of sub-merchantable trees or brush
- Prescribed burning (broadcast burning, underburning, jackpot burning)
- Mechanical or hand piling and burning of slash
- Mastication of activity fuels, sub-merchantable trees or brush
- Biomass removal
- Non-commercial thinning of lower branches to reduce ladder fuel
- Leave tree preparation and pruning – to protect the leave trees during burning activities

Before and after planting, treatment for animal damage control by pocket gophers would occur where necessary. Pocket gopher populations increase post-harvest with a flush in vegetation such as forbs, grasses, shrubs and small trees whose roots supply a ready food source. Gophers damage young trees by stem girdling and clipping, root pruning, and root exposure caused by burrowing, all of which can result in a failed plantation.

Non-commercial fuels treatments could include:

- Slashing of sub-merchantable trees or brush,
- Non-commercial thinning,
- Prescribed burning (broadcast burning, underburning, jackpot burning),
- Mastication of activity fuels, sub-merchantable trees or brush,
- Biomass removal, and
- Leave tree pruning.

Work would be done by hand and/or mechanical equipment, depending on slope. Objectives of the fuels treatments are to reduce stand density, influence species composition, and to reduce surface and ladder fuels in order to alter and reduce potential fire behavior. Multiple entries may be required to achieve the desired fuel reduction objectives.

The project proposes to decommission up to 1.5 miles of user-created trails in T43N, R4W, Sections 24, 26, 27, and decommission the legacy roads in Units 6 and 20. These roads are no longer needed for management and are inhibiting forest productivity.

A combination of silvicultural prescriptions may be used when appropriate within commercial harvest units:

- Clearcut with Reserves: retain an average of 5 trees per acre to meet snag recruitment minimums.
- Seedtree with reserves: retain an average 8-12 trees per acre to provide an additional early seral regeneration source and maintain local genetics.
- Shelterwood: retain on average 10-20 trees per acre to provide an additional regeneration source and provide shade protection for young seedlings on hot, dry aspects.
- Irregular shelterwood: retain an average 5-15 trees per acres in such a manner that trees are spread unevenly throughout the unit; therefore the area could resemble either a clearcut with reserves, seedtree, shelterwood, or even heavier retention dependent on presence of early seral species and the need for shade protection for young seedlings.
- Improvement cut: intermediate cut used to remove competition of shade tolerant species from early seral species.

- Old growth enhancement/ single tree selection: a highly selective management approach to remove competition and increase growth of older, mature, disease resistant tree species, especially western red cedar.

Table 2. Vegetation treatment types by unit

Unit	Treatment Type	Acres
1	Seedtree w/Reserves	40
2	Shelterwood w/Reserves	23
3	Clearcut w/Reserves	11
4	Single Tree Selection	18
5	Seedtree w/Reserves	61
6	Clearcut w/Reserves	76
7	Irregular Shelterwood w/Reserves	16
8	Clearcut w/Reserves	44
9	Clearcut w/Reserves	3
10	Clearcut w/Reserves	6
11	Irregular Shelterwood w/Reserves	50
12	Single Tree Selection	18
13	Single Tree Selection	14
13A	Single Tree Selection	7
14	Clearcut w/Reserves	11
15	Clearcut w/Reserves	8
16	Clearcut w/Reserves	30
17	Clearcut w/Reserves	30
18	Clearcut w/Reserves	6
19	Clearcut w/Reserves	23
20	Clearcut w/Reserves	126
21	Single Tree Selection	13
22	Clearcut w/Reserves	28
23	Improvement Cut	9
24	Irregular Shelterwood w/Reserves	16
25	Clearcut w/Reserves	14
F1	Mechanical Pre-commercial Thinning and Hand Thinning	28
F2	Mechanical Pre-commercial Thinning and Hand Thinning	26
F3	Mechanical Pre-commercial Thinning and Hand Thinning	29

Unit	Treatment Type	Acres
F4	Mechanical Treatment Below Overstory (Natural Regeneration and Brush)	10
F5	Mechanical Pre-commercial Thinning	6
F6	Mechanical Pre-commercial Thinning and Hand Thinning	28
F7	Mechanical Modified Free Thinning and Hand Free Thinning (Ponderosa Pine Plantation)	114
Total Vegetation Treatment Acres		**942**
Total Commercial Timber Harvest		**701**
Regeneration Harvest = 622 Acres / Intermediate Harvest = 79 Acres		
Total Non-commercial Fuels Treatment		**241**

Required Design Features

The following design feature (Timber Sale Contract Provision, currently B6.24) is required to ensure compliance with the regulatory framework for this resource and/or to reduce the risk of adverse impacts to this resource. A description is provided as to when, where and how the design feature should be applied and/or what conditions would trigger the need to apply the design feature.

- Protect TES plant species and/or potential habitat identified at any point during planning or implementation as recommended by the unit botanist and approved by the appropriate line officer.

  Anticipated Effectiveness: effectiveness is moderate to high based upon past experience.

Appropriate protection of TES plant species may vary tremendously depending upon individual species biology and the nature of the action being implemented. Appropriate management responses may range from careful avoidance to no management changes depending upon the site and species involved. Determination of appropriate response will be made by the unit botanist with management if the need should arise.

Cause-Effect Relationship

There will be no cause-effect relationship for many of the plant species of concern simply because habitat is not present or a species' local range is not included. However, potential habitat and potential occurrences for other species as outlined in the Determinations table included in this report may have cause-effect relationships. The direct effects would primarily be provided through mechanical disturbances from the proposed actions. For some species, this effect could be detrimental to existing plants or habitats. For other species the actions would result in improved habitat conditions. Some of these also may be mechanically impacted in a detrimental manner; however, physical disturbance of the site can benefit or maintain the species and suitable habitat into the future. The primary indirect effect would be the potential weed influx that may follow harvest and the prescribed fire.

Regulatory Framework

The proposed action has been reviewed and is determined to be in compliance with the management framework applicable to this resource. The laws, regulations, policies and Forest Plan direction applicable to this project and this resource are as follows:

Threatened and endangered species are designated under the Endangered Species Act. It is the policy of Congress that all Federal departments shall seek to conserve endangered and threatened species and shall utilize their authorities in furtherance of this purpose (ESA 1531.2b). Three plant species are listed as threatened potentially occur on lands administered by the Nez Perce – Clearwater National Forest. These are Macfarlane's four-o'clock (*Mirabilis macfarlanei*), water howellia (*Howellia aquatilis*), and Spalding's catchfly (*Silene spaldingii*). In addition, whitebark pine (*Pinus albicaulis*) is a candidate for listing. Current direction from the U.S. Fish and Wildlife Service directs Macfarlane's four-o'clock and Spalding's catchfly only need to be addressed for projects in Idaho County. Existing knowledge and earlier, more precise determinations and direction from the FWS clarify that these species only occur in parts of the Salmon River Canyon on the Nez Perce unit of the forest. Water howellia occurs in Latah and Benewah counties, which includes the project area.

Sensitive species are defined in the Forest Service Manual (FSM 2670.5) as "those plant and animal species identified by the Regional Forester for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers, density, or habitat capability that reduce a species/existing distribution." In FSM 2670.22, management direction for sensitive species is in part, to ensure that species do not become threatened or endangered, because of Forest Service actions and to maintain viable populations of all native species. The most recent update to the sensitive species list became effective in May 2011. The Forest Service must evaluate impacts to sensitive species through a biological evaluation.

This report contains the necessary determinations section and discussion of effects for sensitive plant species to serve as the Biological Evaluation for rare plants as directed by the streamlined BE processes outlined in the FSM. This report also discloses and documents the effects to the threatened plant species that potentially occur on the forest, thus this report also serves as the Biological Assessment for this project.

The forest plan states that no action will be taken that will jeopardize a threatened and/or endangered species. As stated, the objective for managing sensitive species is to ensure population viability throughout their range on National Forest lands and to ensure they do not become federally listed as threatened or endangered. The forest plan supports this direction but does not set specific standards and guides for sensitive plants. The proposed actions are consistent with this direction to the extent that proposed management actions would not adversely affect viability of existing sensitive plant populations or habitat.

The Forest Service Manual, 4063.3 directs that standards for protection and management of a research natural area must support and promote the basic objectives and purposes of establishing the area. General standards include protecting research natural areas against activities that directly or indirectly modify ecological processes. The prime consideration in managing research natural areas is maintenance of unmodified conditions and natural processes. Logging and gathering of wood are specifically prohibited.

Extraordinary Circumstances

Following are the resource conditions that should be considered in determining whether extraordinary circumstances related to a proposed action warrant further analysis and documentation in an EA or an EIS:

1) Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species;
2) Research natural areas

Concerning research natural areas, no extraordinary circumstances need to be considered for this resource because they are excluded from the project.

Concerning plant species of concern, the following conditions were necessary to consider and the following determinations are made based on a review of the proposed action, required design features, the regulatory framework, and necessary analysis for this resource:

- **Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species**

Extraordinary Circumstance
Will not have extraordinary circumstances associated with the proposed actions.

Federally Listed Threatened or Endangered Species

Plants

The listed plant species that occur on the Nez Perce – Clearwater Forest are not found in the project area. This is based upon the absence of the plant communities they are a part of and knowledge of the local species' range that excludes the project area. Details are provided in the Direct/Indirect Effects discussion below.

Extraordinary Circumstances Determination:
Not necessary to consider for this project. (i.e. resource not found in the project area or no activities are proposed that affect the resource)

Sensitive Species

Plants

Potential species occurrences and suitable habitat for sensitive plant species are expected for several species as summarized in the determinations table below. The degree of effect from proposed management is variable depending upon individual species biology, ranging from detriment to potential enhancement. Losses, should they occur would be insignificant to the overall occurrence of populations or suitable habitat that maintain overall species viability.

Extraordinary Circumstances Determination:
Will not have extraordinary circumstances associated with the proposed actions.

Description of the Spatial and Temporal Bounds used for Effects Analyses

Spatial Boundary

The spatial boundary includes lands within the entire project area that may be subjected to proposed management activities. The rationale for this is that the effects are site specific to areas treated within the project area and will not extend beyond the boundaries, and resource factors from outside the defined area will likewise not affect the resource within.

Temporal Boundary

The temporal bounds of this analysis are limited primarily to the time period of the proposed implementation.

Direct/Indirect Effects

Federally Listed Species

Three plant species are listed as Threatened potentially occur on lands administered by the Nez Perce – Clearwater National Forest. The Threatened plants are Macfarlane's four-o'clock (*Mirabilis macfarlanei*), water howellia (*Howellia aquatilis*), and Spalding's catchfly (*Silene spaldingii*). In addition, whitebark pine (*Pinus albicaulis*) is a Candidate for listing. Current direction from the U.S. Fish and Wildlife Service directs Macfarlane's four-o'clock and Spalding's catchfly only need to be addressed for Forest projects that occur in Idaho County. In Idaho, water howellia is limited to Latah and Benewah counties, which include portions of the Palouse District, including the project area. However; the aquatic habitats limited to broad valley floors do not occur in or near the project area. Elevations in the project area do not reach suitable elevations to support whitebark pine. Thus this project will have **no effect** on any of these species.

Sensitive Species

No sensitive species are known to occur within the project area; however suitable habitat is present for eleven species in the following table. Two of these, *Blechnum spicant* and *Cypripedium fasciculatum*, have known occurrences close to the project area. While occurrence of some of these species in the project areas is anticipated, surveys during the 2018 field season did not locate any populations.

Potential occurrence and habitat for species requiring older forest habitat could decline with negative effects most likely occurring to *Blechnum spicant, Cypripedium fasciculatum, Buxbaumia viridis*, and most species of *Botrychium*, though some species of the latter have been observed to sometimes inhabit open transitional habitats. Activities that change the light and temperature regime would be expected to impact *Blechnum* and *Cypripedium* in particular. Hammet (2001) and Blake and Ebrahimi (1992) noted that *Blechnum* could persist in managed forest that left some stand structure intact. Lichthardt (2002) found *Cypripedium* could persist if the overstory was largely left intact, but it would not be expected to survive areas subjected to even-aged management (Greenlee 1997). Hays (1995) observed this orchid to occur in forests that had undergone understory burns, but Pipp (1999) observed populations to entirely disappear in areas that were subjected to stand replacing fire. *Buxbaumia* would likewise be similarly impacted, though most occurrences and preferred habitat would be associated with riparian zones, which would be largely excluded from vegetation management. *Hookeria lucens* and *Rhizomnium nudum* generally are found in such forests, but are mostly limited to wet seeps and the immediate stream channel, thus are also largely protected from disturbance.

Invasive species anticipated to increase after the fires and ground disturbing activities provide the primary indirect threat to sensitive plant species. Due to the elevation and potential habitats present, the weed influx is unlikely to be heavy or at least not expected to occur long term in the more mesic northern forests. In such cases thistles would be expected to be the primary invasive species; however, observations of fires and even aged management have shown this increase is often short term and other native increaser species and shrubs generally outcompete them within a few years. There is potential sensitive plant species that respond to open conditions could be suppressed or excluded by such invasive plants for a time.

Determinations Rational

Botanists have reviewed this project, used available information on species distributions and habitat (using one or more of the following: topo maps, aerial photos, field reconnaissance, previous surveys, habitat modeling), and then assessed the potential for impacts for all federal listed and Region 1 sensitive species. If the project was determined to have **no effect** or **no impact**, this determination was based on one or more of these criteria:

- habitat for the species is not present in the project area.
- habitat for the species is present but the species does not occur in this area.
- habitat for the species is present, the species occurs or may occur in the project area, but the project would not have any direct, indirect or cumulative effects on this species.

Sensitive species with a **may impact** determination may be affected by the project, but those effects would not cause any concern for overall species viability. This is generally due to the overall secure nature of other occurrences or habitat or the species may be benefited by the activity. Sometimes the determination may be mixed.

Species Determinations

Plant Species	Cat.*	Species Presence	Habitat Presence	Species Potentially Affected?	Habitat Potentially Affected?	Determination**
Water howellia *Howellia aquatilis*	T	No	No	No	No	NE
MacFarlane's four-o'clock *Mirabilis macfarlanei*	T	No	No	No	No	NE
Spalding's catchfly *Silene Spaldingii*	T	No	No	No	No	NE
Whitebark pine *Pinus albicaulis*	C	No	No	No	No	NE
Maidenhair spleenwort *Asplenium trichomanes*	S	No	No	No	No	NI
Payson's milkvetch *Astragalus paysonii*	S	No	No	No	No	NI
Deerfern *Blechnum spicant*	S	Potential	Yes	Yes	Yes	**MI**
Crenulate moonwort *Botrychium crenulatum*	S	Potential	Yes	Yes	Yes	**MI**
Lance-leaf moonwort *Botrychium lanceolatum* var. *lanceolatum*	S	Potential	Yes	Yes	Yes	**MI**
Slender moonwort *Botrychium lineare*	S	No	No	No	No	NI
Mingan moonwort *Botrychium minganense*	S	Potential	Yes	Yes	Yes	**MI**
Mountain moonwort *Botrychium montanum*	S	Potential	Yes	Yes	Yes	**MI**
Northern moonwort *Botrychium pinnatum*	S	Potential	Yes	Yes	Yes	**MI**
Least moonwort *Botrychium simplex*	S	Potential	Yes	Yes	Yes	**MI**
Bug-on-a-stick *Buxbaumia aphylla*	S	No	No	No	No	NI

Plant Species	Cat.*	Species Presence	Habitat Presence	Species Potentially Affected?	Habitat Potentially Affected?	Determination**
Green bug-on-a-stick *Buxbaumia viridis*	S	Potential	Yes	Yes	Yes	**MI**
Broadfruit mariposa *Calochortus nitidus*	S	No	No	No	No	NI
Contance's bittercress *Cardamine constancei*	S	No	No	No	No	NI
Buxbaum's sedge *Carex buxbaumii*	S	No	No	No	No	NI
Bristle-stalked sedge *Carex leptalea*	S	No	No	No	No	NI
Many headed sedge *Carex sychnocephala*	S	No	No	No	No	NI
Anderegg's cladonia *Cladonia andereggii*	S	No	No	No	No	NI
Pacific dogwood *Cornus nuttallii*	S	No	No	No	No	NI
Clustered lady's slipper *Cypripedium fasciculatum*	S	Potential	Yes	Yes	Yes	**MI**
Dasynotus *Dasynotus daubenmirei*	S	No	No	No	No	NI
Idaho douglasia *Douglasia idahoensis*	S	No	No	No	No	NI
Giant helleborine *Epipactis gigantea*	S	No	No	No	No	NI
Puzzling halimolobos *Halimolobos perplexa* var. *perplexa*	S	No	No	No	No	NI
Sticky goldenweed *Haplopappus hirtus* var. *sonchifolius*	S	No	No	No	No	NI
Light hookeria *Hookeria lucens*	S	Potential	Yes	Yes	Yes	**MI**
Salmon-flowered desert-parsley *Lomatium salmoniflorum*	S	No	No	No	No	NI
Chickweed monkeyflower *Mimulus alsinoides*	S	No	No	No	No	NI
Spacious monkeyflower *Mimulus ampliatus*	S	No	No	No	No	NI
Thin sepal monkeyflower *Mimulus hymenophyllus*	S	No	No	No	No	NI
Gold-back fern *Pentagramma triangularis* var. *triangularis*	S	No	No	No	No	NI
Sweet coltsfoot *Petasites frigidus* var. *palmatus*	S	No	No	No	No	NI
Licorice fern *Polypodium glycyrrhiza*	S	No	No	No	No	NI

Plant Species	Cat.*	Species Presence	Habitat Presence	Species Potentially Affected?	Habitat Potentially Affected?	Determination**
Naked-stem rhizomnium *Rhizomnium nudum*	S	Potential	Yes	Yes	Yes	**MI**
Mendocino sphagnum *Sphagnum mendocinum*	S	No	No	No	No	NI
Evergreen kittentail *Synthyris platycarpa*	S	No	No	No	No	NI
Sierra wood-fern *Thelypteris nevadensis*	S	No	No	No	No	NI
Short-style sticky tofieldia *Triantha occidentalis* ssp. *brevistyla*	S	No	No	No	No	NI
Douglas clover *Trifolium douglasii*	S	No	No	No	No	NI
Plumed clover *Trifolium plumosum* var. *amplifolium*	S	No	No	No	No	NI
Idaho barren strawberry *Waldsteinia idahoensis*	S	No	No	No	No	NI

***Category: T** = Threatened; **E** = Endangered; **P** = Proposed; **C** = Candidate; **S** = Sensitive
****Federally listed (Threatened) Species Determination: NE** = No Effect; **BE** = Beneficial Effect; **NL** = Not likely to adversely affect; **LT** = Likely to adversely affect. **Sensitive Species Determination: NI** = No Impact; **BI** = Beneficial Impact; **MI** = May impact individuals or habitat but not likely to cause trend toward federal listing or reduce viability for the population or species; **LI** = Likely to impact individuals or habitat with the consequence that the action may contribute towards federal listing or result in reduced viability for the population or species.

Cumulative Effects

Discussion of cumulative effects for rare plants is addressed through the general trend of the suitable habitat required by these species as a result of past, present and future management actions. It generally is not possible to directly quantify effects of specific activities that are several years or decades old on species of concern today. The status and occurrence of rare plants was completely unknown for much of the management history of the watershed. Historically the changes in condition and abundance of specific habitats important to these species are also largely unknown. Therefore the effects of these past projects can only be qualified through general discussions. However, the results of past projects contribute to the current condition, which can be used to discuss effects of proposed activities on rare plant species.

Forest management and prescribed fire would reduce late seral habitats required by rare plant species that require older forests. Such a downward trend in habitat quality would not lead to concerns for overall population viability, since these habitats are common in much of the forest and will not undergo disturbance associated with other foreseeable projects. Recovery of suitable habitat in the treatment areas could vary from a few years to several decades depending upon the species and state of the new, post-management baseline condition. For early seral or transitional sensitive species, the post-management baseline condition is one of habitat initiation or improvement to help maintain or reset the habitat for the future. Later seral conditions that may provide habitat or rare species requiring older forests may require decades after treatment to again provide suitable habitat. However, treatments intended to promote or maintain older forests could benefit such species through stand maintenance.

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